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AUTHOR(S):

Toda, Takefumi

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## Transition of the Conception of Knowledge: From Descartes to Reid<sup>(1)</sup>

Takefumi Toda

In this paper, I discuss the conception of knowledge in modern philosophy. I will not analyze it through the entire course of modern philosophy but instead focus particularly on British empiricists. I will then describe how changes in the conception of knowledge occurred during this period by the introduction of psychological considerations into the epistemology.

### **I. Pre-British empiricists: Descartes**

Before focusing on British empiricists, we must pay some attention to Descartes. Descartes is undoubtedly one of the founders of modern epistemology. As is well known, he tried to overturn the scholastic philosophy by laying a solid foundation. In doing so, he initiated the notion of methodological skepticism; that is, he decided to question everything that had even the slightest reason to be doubted. He explicitly expresses this decision as follows.

[B]ut as I then desired to give my attention solely to the search after truth, I thought that a procedure exactly the opposite was called for, and that I ought to reject as absolutely false all opinions in regard to which I could suppose the least ground for doubt, in order to ascertain whether after that there remained aught in my belief that was wholly indubitable.<sup>(2)</sup>

Today, this position is known as foundationalism. Descartes' foundationalism has an important feature: the foundation of our system of knowledge must be such that it rejects all possible doubts. That is, it must have certainty. In other words, if there is even the slightest doubt—even if it has 99.999% reliability—it does not deserve to be considered as the foundation of our knowledge system.

It is certain that Descartes tried to reform our system of knowledge or science, but notwithstanding his trial, there may have been some things that he did not question.<sup>(3)</sup> This is the conception of knowledge. To treat knowledge as having certainty has been a tradition of philosophy since the Greek era, when knowledge was called *episteme* (ἐπιστήμη) and was differentiated from opinion (δόξα). This tradition continues even today, albeit with modifications.

Even if Descartes accepts the conception of knowledge at face value without doubting it (since we assume that he should question anything that raises doubt), he may not have to be

blamed for doing so. Of course, this will cast serious doubts on the success of his project. However, in this paper, I will not enter that debate. At this juncture, being able to identify his conception of knowledge will suffice.

## II. Locke

Next, we proceed to Locke. Similar to Descartes, he was an eminent philosopher as well as a scientist. It is well known that he was a physicist and was said to have been an assistant to Robert Boyle. Like many other thinkers during this period, Locke was influenced by Descartes. However, with regard to epistemology, he seemed to take a very different stance.

As mentioned above, Descartes took a rigid stance on foundationalism; he believed that the foundation of our scientific or knowledge system must have certainty. Locke, however, did not follow Descartes' line of belief. He did not seek a firm foundation for a knowledge system as Descartes did. Rather, he took the then scientific theory for granted. This theory, the so-called corpuscular hypothesis, explains various events in terms of minute particles or atoms. According to this theory, our world consists of particles, and it is the inherent qualities of these particles that help us create perceptions about the external world. Following Descartes, Locke called these perceptions "ideas." Descartes considered some ideas as innate, but Locke rejected innate ideas and believed that all ideas were generated through experience.<sup>(4)</sup> This belief is the reason that Locke is considered to be the founder of British empiricism.

Locke said that our knowledge was composed of such ideas. However, it would be incorrect to assume that his epistemology is completely grounded on his adoption of the corpuscular hypothesis. If we go by this supposition, then we will be led to regard his conception of knowledge as not having certainty, which is not the case. To ascertain this point, we must examine his conception of knowledge in greater detail.

Locke evolved his conception of knowledge in Book IV of his *Essay*, where he describes knowledge as follows.

Knowledge then seems to me to be nothing but the perception of the connexion of and agreement, or disagreement and repugnancy of any of our ideas. In this alone it consists. Where this perception is, there is knowledge, and where it is not, there, though we may fancy, guess, or believe, yet we always come short of knowledge. For when we know that white is not black, what do we else but perceive, that these two ideas do not agree? When we possess ourselves with the utmost security of the demonstration, that the three angles of a triangle are equal to two right ones, what do we more but perceive, that equality to two right ones does necessarily agree to, and is inseparable from, the three angles of a triangle.<sup>(5)</sup>

Moreover, he classifies these perceptions of agreement or disagreement of ideas under four groups: (1) identity or diversity, (2) relation, (3) co-existence or necessary connexion, and (4) real existence. The fourth, real existence, may seem problematic at first glance. If we want to understand the reality of our ideas, analyzing our ideas alone would be insufficient. But the other three groups do not pose any such problems. To have perceptions, we have to come up with two or more ideas. Metaphorically speaking, perception from the first group to the third is horizontal. We can even say that if our knowledge depends on the horizontal perception of ideas, then Locke's conception of knowledge (except for that about real existence) is irrelevant to the corpuscular hypothesis, for we can compare our ideas, whatever causes they may have, and all we need for comparing them is some phenomena, which are called ideas by the corpuscular hypothesis.

With the above definition, Locke believed that he found a means to ascertain some types of knowledge, that is, moral knowledge or mathematical knowledge. We can obtain this knowledge by comparing ideas and apprehending their relations. By defining knowledge in this manner, he devised means to eliminate uncertainty in acquired knowledge.

The above explanation of Locke's epistemology shows that Locke took over the Cartesian conception of knowledge, in which it is thought necessary to have certainty. To elaborate on this point, we must take a look at his words about the essence of external bodies, given in book IV. The following is an example.

Judgment of probability concerning substances may reach further: but that is not knowledge. We are not therefore to wonder, if certainty be to be found in very few general propositions made concerning substances: our knowledge of their qualities and properties goes very seldom further than our senses reach and inform us. Possibly inquisitive and observing men may, by strength of judgment, penetrate further, and, on probabilities taken from wary observation, and hints well laid together, often guess right at what experience has not yet discovered to them. But this is but guessing still; it amounts only to opinion, and has not that certainty which is requisite to knowledge.<sup>(6)</sup>

I think our common sense makes us take it for granted that we know the various qualities of external objects through our senses. This was not the case for Locke. The beliefs we form about external objects through our senses are merely opinions and not knowledge. Locke, we may say, agrees with Descartes on the conception of knowledge, though Locke began his philosophy from a perspective that was very different from that of Descartes. At the same time, we can stress on the differences between the two. Though Locke does not regard some of the information obtained through sensation as knowledge, he evaluates its importance well; moreover, he finds the function performed by our senses to be sufficient. The common factor

between him and the British empiricists after him was that they highly evaluated the beliefs formed through our senses. These empiricists further developed Locke's theories on sensation.<sup>(7)</sup>

### III. Berkeley

In this section, I discuss Berkeley. He is an important figure for this paper, for I think it is he who was responsible for the radical change in the conception of knowledge.

His attack on Locke is known as a defense against skepticism, which stems from materialism. That is, he tried to secure our knowledge of sensation by bringing all material objects into the mental objects. What I consider more important is that his argument triggered a change in the conception of knowledge, though this point is rarely mentioned. As we saw in the previous section, Locke maintained the traditional or Cartesian conception of knowledge, but it was subsequently transformed by Berkeley.

In another paper, I analyzed the change in the conception of the "immediacy of perception" in the modern period.<sup>(8)</sup> Additionally, I pointed out that Berkeley blurred this conception by introducing a psychological explanation about how we perceive the outer world with our own eyes. Once again, I will briefly highlight this point.

In *New Theory of Vision*, Berkeley explains how eyes perceive distance. He stresses the heterogeneity of visual and tactual objects. When we see certain objects at a distance, the first thing we notice is their color; in contrast, for objects at a close range, our tactile senses play a greater role (NTV 108). However, when we see a visual object, tactual objects that we consider to be associated with the visual object are suggested to our minds. As a result, we perceive some bodies as individuals. Therefore, our conception of objects is based on both immediate objects, perceived with the eyes, and mediate objects, perceived through touch. Berkeley insists that he changes material bodies into ideas, and by doing so, makes it possible for us to have immediate access to material bodies. Regardless of his intention, by introducing a psychological process into his theory, he indicates that he bases perceptions of external bodies on both immediate and mediate stimuli; thus, he blurred the conception of immediacy.

The above interpretation of immediate perception in Berkeley's epistemology is in accordance with his conception of knowledge. Though Berkeley, unlike Locke, wants to secure our sense-based knowledge, it is not sufficient to merely convert external bodies into ideas. The immediacy of perception cannot establish the certainty of our sense-based knowledge because it is threatened by the inductive property of our experience, which is exactly why Hume attacked the traditional conception of knowledge. Berkeley hardly mentioned this problem, but I do not think that it is probably because he did not notice it to begin with. Rather, I think he chose to put greater confidence into the regularity of our experience which

demonstrates the benevolence of our Maker. At the same time, he chose to expand our conception of knowledge. My interpretation places Berkeley into a type of reliabilist camp in epistemology. According to Berkeley, the connection between visual and tactual experiences indicates a type of natural law. He also says that we should be able to connect them by means of a faculty called "suggestion," which our Maker has furnished us with. Hence, the process of this transition from visual experience to tactual experience should be made reliable by both natural course and our constitution, which ultimately are derived from the benevolence of our Maker. If we are able to obtain some perceptual beliefs by reliable processes, we should consider them justified. This is the central thesis of reliabilism, and my interpretation is that this thesis is also found in Berkeley's philosophy, although he did not fully develop this epistemology.

This is why I mention Berkeley's enterprise as expanding the conception of knowledge. To regard knowledge as a justified belief is not equivalent to regarding it as having certainty. Rather, to do so is to destroy the traditional conception of knowledge and thus make Timaeus victorious against Socrates.

#### **IV. Hume and Reid**

In the previous section, I showed the collapse of the traditional conception of knowledge that occurred when Berkeley introduced physiology into the evaluation of our epistemic status. After him, British philosophers, whether consciously or unconsciously, developed epistemology along his lines. In this section, I briefly touch upon Hume's argument and then delve into his opponent Reid's argument in greater detail.

At one time, Hume's epistemology was paid much attention by virtue of its skeptical aspect, and his epistemology was believed to have destroyed the conception of knowledge. Nowadays, however, many scholars have come to estimate its constructive aspect.

Hume asserts that it is impossible for us to obtain the kind of knowledge that Descartes sought, that is, knowledge that can escape all doubts. His arguments cover several aspects, for example, causality, the existence of an outer world, or an identity of the self. Considering causality, for instance, we are inclined to believe that event A is a cause of event B if A has always been followed by B, but such belief is only attained by habit, which does not guarantee that the same event will occur in the future. In other words, our belief about causality does not escape doubt even if its reliability is very high. As a result, Hume admits that he himself is something of a skeptic, though his skepticism tends to be moderate rather than radical.<sup>(9)</sup>

It is certain that his skepticism led to the destruction of knowledge, but only if we consider this "knowledge" from a Cartesian or traditional perspective. To reiterate, only if we adopt such a stance can Hume's epistemology prove to be destructive. However, as mentioned above,

the destruction of the traditional conception of knowledge has already begun. We can regard Hume as a successor of this enterprise. Hume's intention was not to destroy knowledge but rather to soften the conception of knowledge. I know that many thinkers today have already asserted this point. This interpretation illuminates the constructive aspect of Hume's epistemology.

Hume's arguments share certain features with Berkeley's. As already mentioned, Hume also explains our epistemic status by shedding light on our psychological status; this explanation prompted people to name him a pioneer of associationism. Incorporating psychology into epistemology helped both Berkeley and Hume to reconstruct the conception of knowledge.

It was Thomas Reid who advanced Hume's epistemology even though he was Hume's contemporary. However, Reid did not do this intentionally. Reid regarded Hume's epistemology as constituting skepticism and considered himself to be Hume's toughest opponent. While there is no doubt that their arguments on epistemology have rather different tones, I am of the opinion that their differences are really two sides of the same coin. Their differences lie not in the substance of their argument but rather in the point that each one wished to stress upon. To explain this a little better, I must take a closer look at Reid's epistemology.

Reid was anxious to defend our knowledge against skepticism. Yet, he did not find a way to defend the traditional conception of knowledge. He was a first-rank philosopher as well as a psychologist at that time. Along with Berkeley, he introduced a psychological consideration into his epistemology, which Locke, for example, tried to avoid.<sup>(10)</sup> According to Reid, the link between us and the external world consists of multiple stages. The initial parts of their stages are physical, and the subsequent stages are mental. The former consist of stimuli received by the body and then the transmission of these stimuli to the brain through the nervous system. The stimuli received by the brain produce a sensation in the mind. The mental process begins when this sensation occurs. The sensation then suggests some concept of the external object to the mind and produces a belief of its existence; Reid terms their occurrence as "perception." Reid's explanation for this process is so perplexing that, even today, many scholars are still attempting to understand it.<sup>(11)</sup> In the paper, I will pass over this discussion. Instead, I would like to stress on the fact that Reid assimilates with Berkeley by introducing mental processes into epistemology. Though Reid calls himself a defender of the concept of the immediacy of perception, that concept has already changed, compared with Descartes, Locke, or Hume. These philosophers' conception of immediate perception is acquaintance, if we can use Russell's terminology.<sup>(12)</sup> I pointed this out in my earlier paper as well as in the present paper, in the section on Berkeley. Like I mentioned in my earlier paper, the change in

the conception of the immediacy of perception led to a change in the conception of knowledge. For many philosophers, the immediacy of perception as acquaintance guarantees our beliefs brought through sensation as knowledge.<sup>(13)</sup> However, according to Reid, whose explanation matched Berkeley's, the immediacy of perception cannot guarantee them by itself.<sup>(14)</sup> Rather, our knowledge is formed through our reliance on our constitution or our inherent nature. Reid expresses one reliable aspect of our nature, that is, common sense. By doing so, Reid and Berkeley tried to secure the beliefs that we form through sensation as knowledge. Earlier, I posited Berkeley as a reliabilist; at this juncture, I think we can say the same thing about Reid.<sup>(15)</sup>

I had mentioned earlier that Reid and Hume were two sides of the same coin. My reasoning behind this assertion is explained in the next paragraph. Hume examined the possibility of a traditional conception of knowledge and, as a result, repudiated his previous stance. Instead he showed that we must have recourse to our nature even if we do not attain certainty with regard to our beliefs, because he thought that we must not adopt absolute skepticism.

My theory is that the conception of knowledge went from an absolutist theory to a reliabilist one. Moreover, it was argued that this transition was prompted by the introduction of a psychological or physiological consideration into epistemology. We might even call it the transition from epistemology to psychology. Of course, these words should not be taken literally. Quoting the famous words of W. V. O. Quine, this transition can be described as "the naturalization of epistemology."<sup>(16)</sup> As another example, I refer to David Hartley, who was also a physiologist and philosopher of this age.

Hartley's main interest lay in how our thought or conduct can be attained on a physiological basis. He was particularly influenced by Newton and philosophers who preceded him, such as Hobbs, Locke, and Berkeley.<sup>(17)</sup> His theory was vigorously attacked by Reid, who considered Hartley's theory to be only a groundless hypothesis; his attack seemed to have missed the mark, for Hartley embraced a peculiar view of knowledge. His conception of knowledge was much softer than that of any other thinker at that time. Hartley recognized that his theory was grounded on a hypothesis; on the other hand, he seemed to have understood the importance of the role that hypotheses play in the advancement of scientific knowledge.

Hartley tries to attribute the vibration in our nerves and medullary substances to ether. He then assumes the existence of ether, while at the same time recognizing that we do not have direct evidence of its existence; as a result, this existence can be supposed only by hypothesis. However, he explains the usefulness of the hypothesis through the example of cipher.

And as the false and imperfect keys, which turn up to the decipherer of the true and complete one, so any hypothesis that has so much plausibility, as to explain a considerable



number of facts, helps us to digest these facts in proper order, to bring new ones to light, and to make Experimenta Crucis for the sake of the future inquirers. The rule of false affords an obvious and strong instance of the possibility of being led, with precision and certainty to a true conclusion from a false position; and it is of the very essence of algebra to proceed in the way of supposition. (Hartley, 1791. 16)

The above words express his soft conception of knowledge. Though his ultimate aim was to establish the intellectual and moral aspects of man, his book is widely devoted to the consideration of the psychological aspects of our sensations. This point brings out his attitude as a physiologist. As mentioned above, he was influenced by Newton or Berkeley; moreover, what influenced Hartley about Berkeley was not his immaterialism but rather his psychological consideration about vision. These points show that when science or psychology penetrates philosophy, our conception is softened. But why is conception of knowledge softened by psychology penetrating epistemology? Of course, the general answer to this question may not exist. Answering this question, even for contemporary times, will involve a very detailed examination, which is not within the scope of the present paper. Nonetheless, one possible answer that I can offer is that epistemology penetrated by psychology serves not only a theoretical purpose but also a practical one. I will touch upon this briefly and then conclude the paper.

In this age, science—as defined in today’s terminology—made remarkable advances. Its rapid growth also accelerated the growth of technology, especially visual technology. Numerous optical instruments were contrived, and the study of our visual systems flourished. These developments naturally call attention to the application of the principles of science to everyday life. Health and medicine in particular were important concerns. Descartes believed medical studies to be the most applied science and placed them at the top of the tree of knowledge. When Berkeley published his *New Theory of Vision*, there were great debates on our visual systems. Many philosophers tried to resolve these problems through metaphysics; however, the theories and principles thus proposed also came under debate, and therefore, the foundation of applied sciences was never settled. Nevertheless, applied sciences were a major priority for many thinkers. I would attribute one reason for this to the immediate effect of applied sciences, particularly medical science, on our everyday lives and to their social demand, even if they may have not always proved beneficial. Moreover, in spite of numerous theories proposed by philosophers, these sciences need not necessarily be based on metaphysics. That is, applied sciences may need some theoretical foundations or considerations, which need not necessarily be rooted in metaphysics.

Even though I have stated that social factors are responsible for the change in the

conception of knowledge, I do not deny that there could be some purely theoretical reasons as well. For example, Goodwin, a psychologist, asserts the following about the importance of Berkeley's works in the history of psychology.

Once the problem of human knowledge became a psychological one, people began asking different questions. Rather than asking a philosophical question like "How much can be known about the nature of reality?" thinkers now began asking questions like "Just exactly how does visual perception work to enhance what we know?" This shift would eventually bring about a scientific psychology.<sup>(18)</sup>

I believe that this theoretical factor in combination with the social factor brought about the change in the conception of knowledge. These factors cannot be clearly distinguished.

If my assumption be valid, these points suggest that modern epistemology took on certain aspects of naturalized epistemology, and I firmly believe that it did. However, it does not appear to have remained constant following this period. Subsequently, Germany became the prime base for epistemology, where it was newly developed as German idealism. I believe that the reasons why the modern epistemology—especially that of British empiricists—failed to evolve into naturalism in a straightforward manner are worth considering; unfortunately, it is not within the scope of this paper to explore the reasons.

Here, it is important to turn to historical recurrences. In the twentieth century, epistemology seems to have taken the same course as in the modern era. In the early twentieth century, although British empiricists influenced the sense-datum theory to some degree, sense-datum theorists had a conception of knowledge that was the same or at least similar to the traditional, strong conception of knowledge supported by Descartes. Therefore they sought to establish an absolute foundation of knowledge. Epistemology in the latter half of the twentieth century, however, turned to the principles of naturalized epistemology, which eventually softened the conception of knowledge once again. For example, Quine is one of the most influential leaders in this movement. Other philosophers such as Goldman or Churchland also concentrate on the psychological process in epistemology rather than on the pursuit of certainty in knowledge.<sup>(19)</sup> In the words of Phillip Kitcher<sup>(20)</sup>, the modern movement is 'the naturalism return' of the modern epistemology.<sup>(21)</sup> Why did such a "return" occur? Or what is the difference between the two? If there are differences, what prompted them? It is worthwhile considering such questions in order to understand our era. However, since these questions are beyond the scope of this paper, I leave them unanswered for the moment.

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- (1) This work was supported by JSPS KAKENHI (Grant-in-Aid for Young Scientists (B)) No. 20720003.
- (2) Descartes, 1931, *Discourse on the Method*, part 4.
- (3) For example, Thomas Reid pointed out that Descartes had accepted the duration of the ego without questioning it. (Reid, 2002)

- (4) Locke, 1975, Book I.
- (5) Locke, 1975, IV. i. 2.
- (6) Locke, 1975, IV. vi. 13.
- (7) In this section, I requested Professor Tomida's opinion on my sketch of Locke's epistemology and received useful advice. I am grateful for his helpful advice and encouragement.
- (8) Toda, 2008.
- (9) I obtained a very helpful suggestion in connection to this point from an article by Professor Emeritus Kamino (2007).
- (10) At this point, I should mention two things. First, Descartes was also in the same camp with Locke. Of course, Descartes was a gifted psychologist and physiologist, as his works clearly demonstrate; yet, he seemed reluctant to introduce the fruits of his labor into his construction of the system of knowledge, which we can see in *Meditation*, where he tries to establish new ground for his theory. Second, this description may be somewhat misleading. The consideration that Locke expressly tried to avoid might be misconstrued as a physiological rather than a mental process. It is certain that Locke himself was a reflective psychologist; nevertheless, the fact remains that Locke hardly mentioned the kind of *mental process* that Berkeley and Reid introduced into epistemology.
- (11) Two problems are evident here. One is whether sensation precedes perception or whether the two occur simultaneously. The latter position was offered by John Immerwahr in "The Development of Reid's Realism" and has been widely discussed ever since. The other problem concerns Reid's concept of "sensation." It is not clear whether the sensation itself serves as the object. To understand the former problem, see Woozley, 1941; Immerwahr, 1978; Pappas, 1989; and Copenhaver, 2004. For the latter, see Buras and J. Todd, 2002.
- (12) Russell, 2007.
- (13) Descartes or Locke believed sensation to possess certainty because of their directness. Moreover, the sense-datum theory appeals to some theorists for the same reason.
- (14) I admit that my words are rather misleading. Berkeley and Reid themselves seem to think that the immediacy of perception strengthens the foundation of knowledge. Yet, as already indicated, their conception of "immediacy" is more complex than that of other philosophers even though it is not clear whether they realized this.
- (15) Phillip de Barry has already delineated Reid as a reliabilist in his book. De Barry, 2002.
- (16) Quine, 1969.
- (17) Of course, Hume was a major associationist. However, he was rarely referred to by Hartley. Nevertheless, it has been implied that Hartley probably had a sound understanding of Hume's philosophy. Cf. Oberg, 1976, 441.
- (18) Goodwin, 2008, 45.
- (19) I must point out that while they can be categorized as naturalists, they held significantly different stances.
- (20) Kitcher, 1992.
- (21) Marcondes treats the transition of modern epistemology from a linguistic point of view, and

indicates that the debates based on the linguistic aspect of modern epistemology were revived in the early twentieth century. These arguments highlight the many aspects in the change of modern epistemology and its revival. See Morcondes, 1998.

## Transition of the Conception of Knowledge: From Descartes to Reid

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In this paper, I discuss the conception of knowledge in modern philosophy. I will not analyze it through the entire course of modern philosophy but instead focus particularly on British empiricists. I will then describe how changes in the conception of knowledge occurred during this period by the introduction of psychological considerations into the epistemology.

In modern philosophy Descartes held the strong conception of knowledge which implied certainty. According to this conception, if our beliefs accept the lowest dubiousness, we cannot consider them as knowledge. Descartes tried to develop his whole epistemic system by means of this conception. John Locke, the founder of British empiricism, took over this conception from Descartes. Though Locke, unlike Descartes, seems not to have taken uncertainty of our beliefs seriously, he distinguished knowledge from opinion, which was the belief which did not have certainty.

I argue that this conception of knowledge changed gradually after Locke. His follower, Berkeley, explicated our perceptual process of vision and introduced it into his epistemology. I think his argument is a sign of the change of epistemology. Many thinkers and scientists came to pay attention to our physiological system of knowledge-generation. In the other words, their concern about what was knowledge shifted to how our knowledge was generated. My main point is that the conception of knowledge was softened with that change. And then, I point out that this change was the naturalization of epistemology in modern period.

(Associate professor of Kyoto University)